



User manual

küschall[®] Ultra-Light

Table of contents

1 General	3
1.1 Introduction	3
1.2 Warning and instruction signs	3
1.3 Description of wheelchair	3
1.4 Use as per specifications	3
1.5 Before using the wheelchair	3
2 Using the wheelchair	4
2.1 Getting into or out of the wheelchair	4
2.2 Driving and steering the wheelchair	4
2.3 Driving over stairs and steps	5
2.4 Driving on ramps and slopes	7
2.5 Stability and balance when sitting in the chair	8
2.6 Drum brake	9
2.7 Parking brakes	10
3 Transporting the wheelchair	12
3.1 Folding and unfolding the wheelchair	12
3.2 Removing and installing the rear wheels	13
4 Adjustments and options	14
4.1 Adjusting the parking brakes	14
4.2 Adjusting the tension of the backrest cover	14
4.3 Height adjustable push handles	15
4.4 Height adjustable armrests	15
4.5 Swing away armrests	16
4.6 Transit wheels	16
4.7 Antitipper	17
4.8 Tipper aid	18
4.9 Cane holder	18
4.10 Security belt	19
4.11 Passive lighting	19
4.12 Air pump	19

5 Service	20
5.1 Cleaning	20
5.2 Maintenance	20
5.3 Service life and disposal	22
5.4 Detecting and repairing defects	23
5.5 Technical data	24
5.6 Warranty conditions	25
6 Adjustments carried out by the authorized dealer	26
6.1 One piece footplate adjustment	26
6.2 Two piece footplate adjustment	28
6.3 Seat height rear adjustment	29
6.4 Rear wheel position adjustment	29
6.5 Seat height front adjustment	30
6.6 Backrest height adjustment	30
6.7 Backrest angle adjustment	31
6.8 Clothes-Guard / Mud-guard adjustment	31

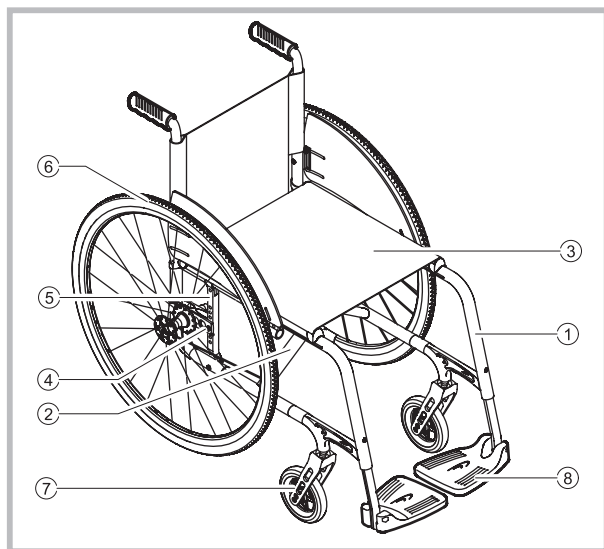


Figure 1

- ① Front frame
- ② Cross brace
- ③ Seat
- ④ Adapter plate
- ⑤ Adapter plate support
- ⑥ Rear wheel
- ⑦ Front wheel
- ⑧ Footplate

CE

1 General

1.1 Introduction

Thank you for purchasing a *küschall*® wheelchair.

With the *küschall*® Ultra-Light you have purchased a top-quality product. In order to make optimum use of its functionalities and learn about its safety requirements, please read these operating instructions carefully and follow the safety instructions.

1.2 Warning and instruction signs

The following signs and abbreviations are used in these operating instructions:



Warning sign containing important information to prevent injuries and material damage.



Useful information for user



Required tool: Hexagon socket wrench 3mm



Required tool: Wrench 8mm



Required tool: Screw driver

Some drawings in this manual are allegorized. Your wheelchair model may differ from the pictured one.

1.3 Description of wheelchair

The wheelchair consists of two side frames ①, which are attached by a cross brace ②. The cross brace to which the seat-cover ③ is attached, enables the wheelchair to be folded. The rear wheels ⑥ are attached to the side frame by the adapter plates ④ and an adapter plate support ⑤. The front wheels ⑦ as well as the footrest ⑧, which can be either one or two piece, are attached to the front of the side frame. (See figure 1)

1.4 Use as per specifications

The wheelchair is driven manually and is used for independent or guided locomotion of gait-impaired persons (e.g. hemiplegia, paraplegia, tetraplegia, multiple sclerosis, traumatic brain injury, etc.). The wheelchair may only be used without a guide by persons who are physically competent to handle the wheelchair (eg. driving, steering and braking). The wheelchair is designed for in- and outdoor use on level ground and paved terrain.

1.5 Before using the wheelchair



Before using the wheelchair for the first time, please read Chapter 2 - *Using the wheelchair* carefully and follow the safety instructions.

For security reasons it is essential that you check the functionality of your wheelchair daily. Pay special attention on the following parts (provided they are mounted): Wheels, backrest, antitipper, pushhandles, quick release fork. Normally, your authorized dealer will unpack and unfold the wheelchair if necessary for you. If you receive your wheelchair unfolded, please read Chapter 3.1 - Folding and unfolding the *wheelchair*.

2 Using the wheelchair



Always adjust the clothes you wear and your driving behaviour to the conditions (weather, road conditions, individual skills etc.).

Please note that the risk of sliding is higher if the ground is wet, on gravel roads and on rough ground.

2.1 Getting into or out of the wheelchair



When getting into or out of your wheelchair, do not stand on the footrests. Danger of tipping!

You should only get into or out of your wheelchair if you are physically competent. Please consult your physician or therapist.

Do not sit on the clothes-guards, the armrests or the brakes when getting on/off the wheelchair. They might bend or break. Danger of injury!

The way you can get into or out of your wheelchair depends on your physical condition and the type of handicap. Generally, the procedure is as follows:

- Pull the parking brake.
- Fold up the foot rests or swing them aside (depending on design)
- Hold on to the wheelchair and, if necessary, to a stable object nearby.

2.2 Driving and steering the wheelchair

Finding the tipping point

The tipping point of the wheelchair depends on the adjustment of the seat position. The correct seat position is adjusted depending on parameters such as the weight of the user, the type of handicap and the driver's driving skills. The seat position which is adjusted upon delivery corresponds to the information indicated in your order.

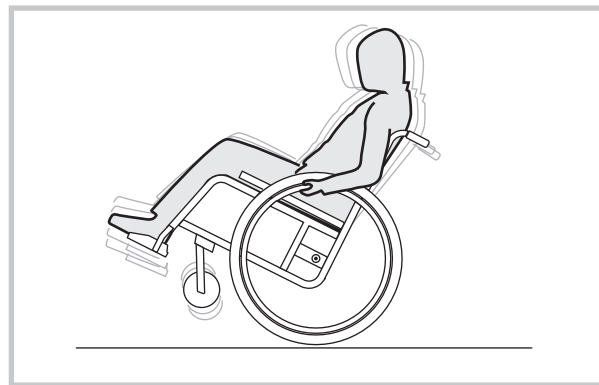


Figure 2

To find the tipping point of your wheelchair, proceed as follows (see Figure 2):



When determining the tipping point, an aide must always stand directly behind the wheelchair in order to catch it in case it tips.

To ensure that you are in control of your wheelchair at any given point, you should not exceed a speed of 7km/h. (4Mph)

- Loosen the brakes
- Sitting in the wheelchair, move forwards briefly, hold both hand rims tightly and pull back with a slight swing.
- By shifting your weight slightly and applying a counter-force to the hand rims, the tipping point can be determined.



To avoid the wheelchair tipping backward, we recommend that the wheelchair should be equipped with an antitipper (see Chapter 4).

Please note that a heavy backpack fixed to the backrest can affect the tipping behaviour of the wheelchair.

2.3 Driving over stairs and steps



Always be very careful and move slowly when driving over curbstones, stairs or other steps.

Do not try to drive over steps which have a height of more than 25 cm.

Only drive on stairs with more than one step if an aide is behind the wheelchair.

With an aide



Figure 3

Driving down a step

- Drive to the edge of the step, make sure that the wheelchair is in a straight position.
- Hold on to the two push handles, on the rear of the wheelchair, put one foot to the bottom part of the frame and tilt the wheelchair backward so that the front wheels leave the ground.
- Hold the wheelchair in this position and push it down the step slowly. The wheelchair driver can support you by using the hand rims.

- Tilt the wheelchair forward until the front wheels have ground contact again.

Driving up a step

- Move the wheelchair backward until the rear wheels hit the edge of the step.
- Pull back both push handles, tilt the wheelchair until the front wheels leave the ground and pull the rear wheels over the edge.
- Move the wheelchair until you can safely tilt the wheelchair forward.

Without an aide



If you want to drive down a step without a guide, you must have perfect control over your wheelchair and must be able to balance it on the rear wheels. (see Finding the Tipping Point in Chapter 2.2).

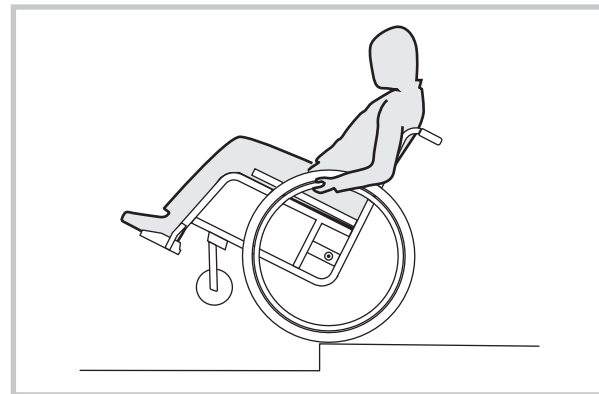


Figure 4

Driving down a step

- Drive to the edge of the step, make sure that the wheelchair is in a straight position.
- Lift up the front wheels from the floor by shifting your body weight and keep your balance.
- Now let the two rear wheels roll down over the edge. Make sure to hold the hand rims tightly.
- Tilt forward the wheelchair until the front wheels have ground contact again.

Driving up a step

- Drive the wheelchair backward until the rear wheels hit the edge of the step.

- Lift up the front wheels from the floor by shifting your body weight and keep your balance.
- Now let the two rear wheels roll up over the edge. Make sure to hold the hand rims tight.
- Move the wheelchair until you can tilt the wheelchair forward safely.
- Lower the front wheels again.

2.4 Driving on ramps and slopes



Only drive on long slopes if a guide is behind the wheelchair.

Do not drive on steep or lateral slopes (max. ascending grade 7°). Danger of tipping!

Avoid abrupt changes of direction when driving on slopes. Danger of tipping!

Never pull the parking brakes when the wheelchair is in motion. Danger of tipping!

Driving uphill

To drive uphill you must set the wheelchair in motion and maintain the motion in order to be able to control the direction.

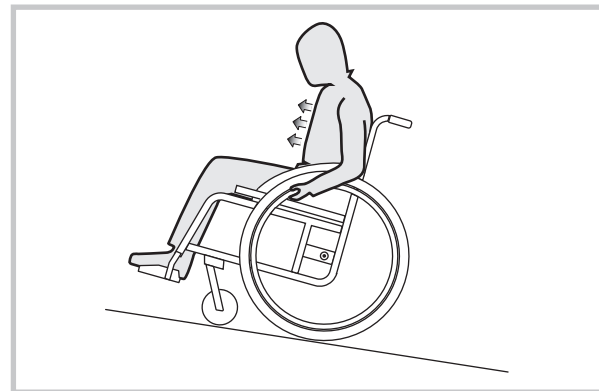


Figure 5

- Lean forward and drive the wheelchair by pushing the hand rims quickly and powerfully.

Downhill

When driving downhill direction and, above all, speed must be controlled.

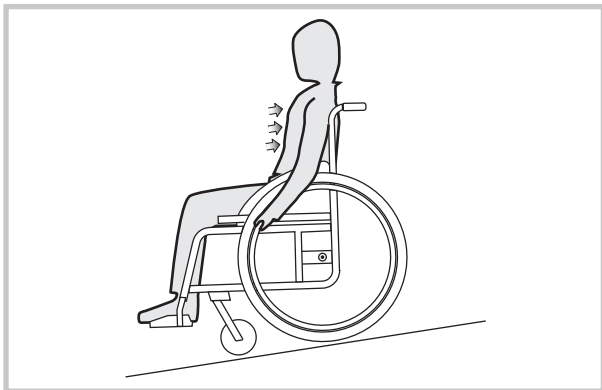


Figure 6

- Lean back and let the hand rims slip through your hands carefully. You should be able to stop the wheelchair at any time by holding the hand rims.



Please note that, the hand rims can heat if you brake for longer periods of time by hand. This applies especially to MaxGrepp and Supergripp handrims

2.5 Stability and balance when sitting in the chair

For many every day life activities you will have to bend out of the wheelchair, forwards, to the side or backwards. This has a great influence on the stability of the wheelchair. In order to keep your balance at any time, please observe the following:

Leaning forward

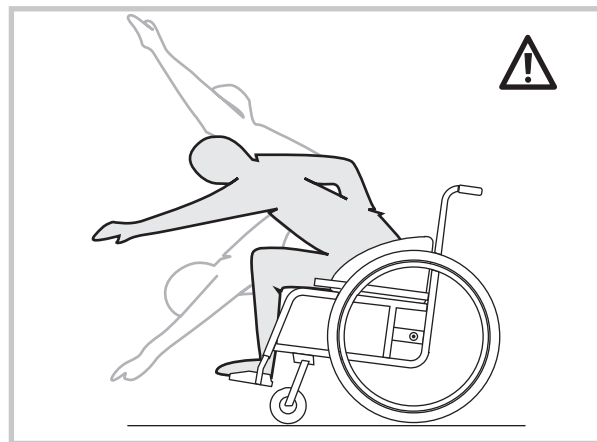


Figure 7

- Align the front wheels to the front. (To do this, move the wheelchair slightly forward and then back again.)
- Apply both parking brakes.
- When leaning forward, make sure that your abdomen remains above the front wheels.



Do not lean forward too much. You might fall out of the wheelchair!

Do not slide forward in your seat to reach out for remote objects. You might fall out of the wheelchair!

Do not try to bend your abdomen forward between your legs in order to pick up something from the floor.

Leaning backward

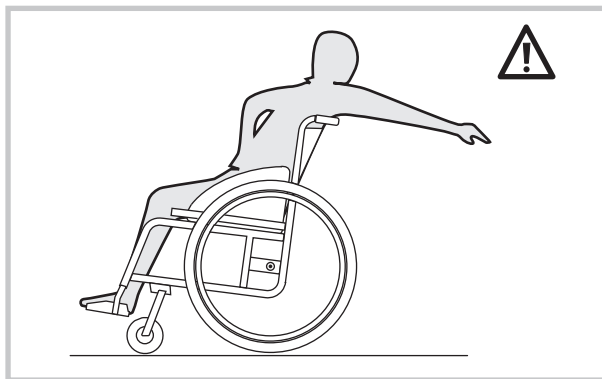


Figure 8

- Align the front wheels to the front. (To do this, move the wheelchair forward a bit and then back again.)
- Do not apply the parking brakes.
- Reach out backward only as much as possible without leaving your sitting position.



Do not lean over the backrest. You might tip backward.

2.6 Drum brake

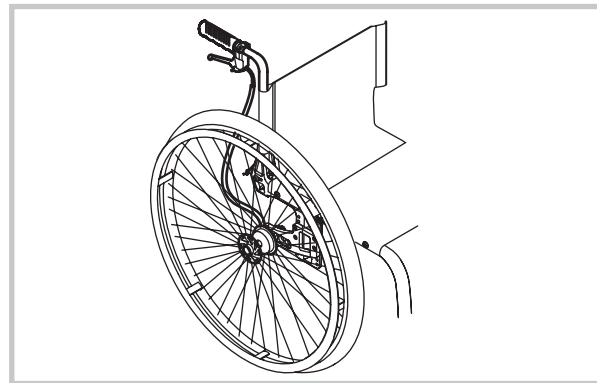


Figure 9

If your wheelchair is equipped with a drum brake, a guide can decelerate the wheelchair. The drum brake can also be used as a parking brake.

Braking

- Pull back the braking lever at the push-handle.

Locking the brake

- Pull the braking lever firmly until the securing lever engages
- Release the braking lever. Now, the brake is locked.

Releasing the brake

- Pull the braking lever and push the small securing lever on the underside of the braking lever until it is disengaged
- Release the braking lever. Now, the brake is released.

2.7 Parking brakes

If your wheelchair is not equipped with a drum brake, deceleration is effected manually by applying force on the hand rims of the rear wheels. The parking brakes are used only for keeping the wheelchair in place when standing and to prevent it from rolling away. The correct function of the parking brakes is ensured only if sufficient air is in the tire. (see Chapter 5.2 - Maintenance)



Never apply the parking brakes when the wheelchair is in motion - Danger of tipping!



For adjusting the parking brakes please see chapter 4.

Standard brake

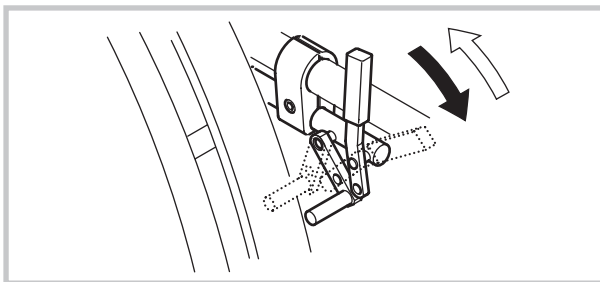


Figure 10

Applying the brake

- Push the brake lever forward until it reaches the stopper.

Releasing the brake

- Pull the braking lever back.

Performance brake

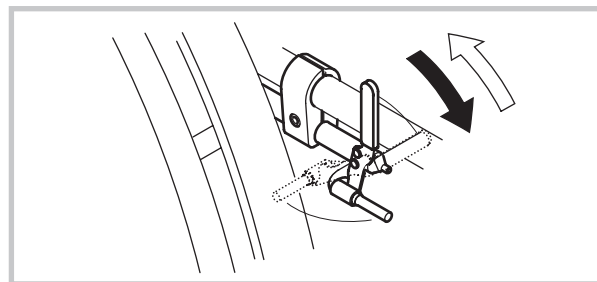


Figure 11

Applying the brake

- Push the brake lever forward until it reaches the stopper.

Releasing the brake

- Pull the braking lever back.

Active brake

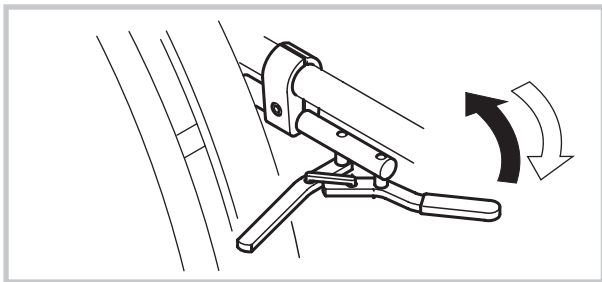


Figure 12

Applying the brake

- Pull the braking lever forward (beside or between your legs) until it reaches the stopper.

Releasing the brake

- Push the braking lever back (beside or between your legs).

Stoplock brake

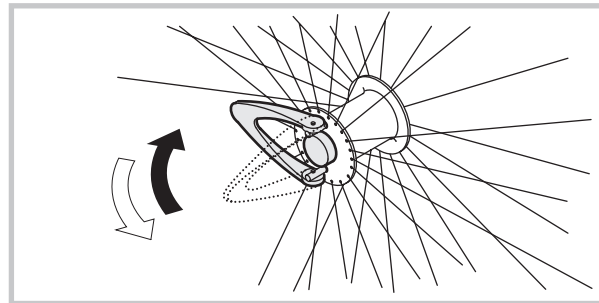


Figure 13

Applying the brake

- Fold the red lever at the hub forward.

Releasing the brake

- Fold the red lever at the hub back.

3 Transporting the wheelchair



Your wheelchair is not suitable for use in vehicles. Do not sit on the wheelchair during a transport, use a properly secured seat.

3.1 Folding and unfolding the wheelchair

Folding the wheelchair

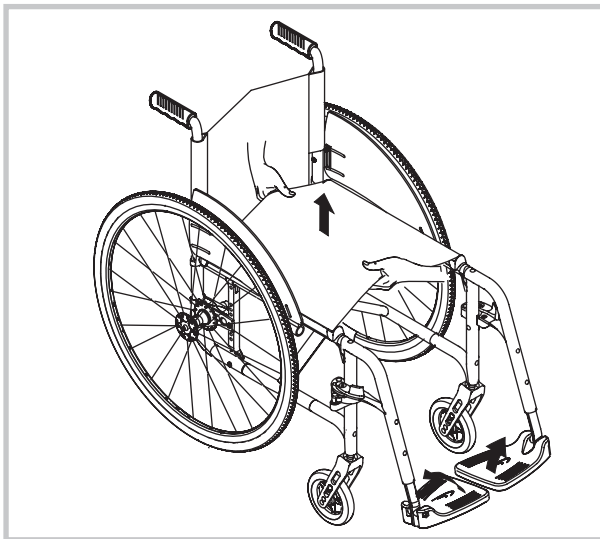


Figure 14

- Remove the seat cushion, if present.
- Flip up the footplate / footplates.
- Check if the parking brakes are released.
- With both hands pull the seat cover upwards. The wheelchair folds up completely.

Unfolding the wheelchair

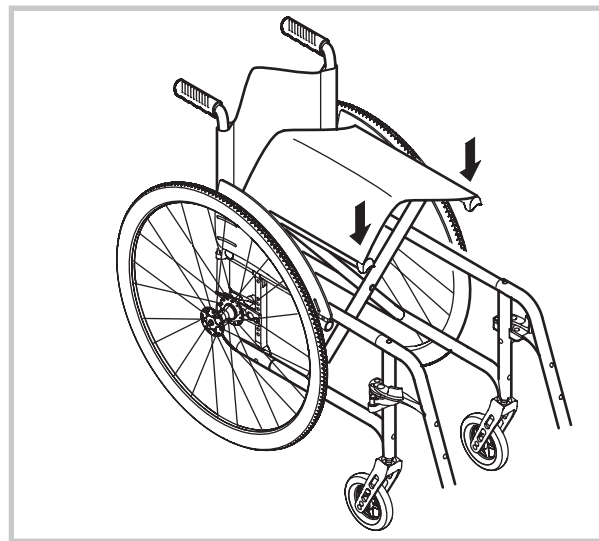


Figure 15

- Press against the front corners of the seat with the palm of your hand until the seat profile snaps into the frame ("click").



Warning: Do not close fingers around the seat profile. There is a danger of catching fingers between frame and seat profile.

- Press the rear corners of the seat downwards until a “click” is heard.
- Flip down the footrests.

3.2 Removing and installing the rear wheels

To reduce the size of your wheelchair, you can remove the rear wheels.

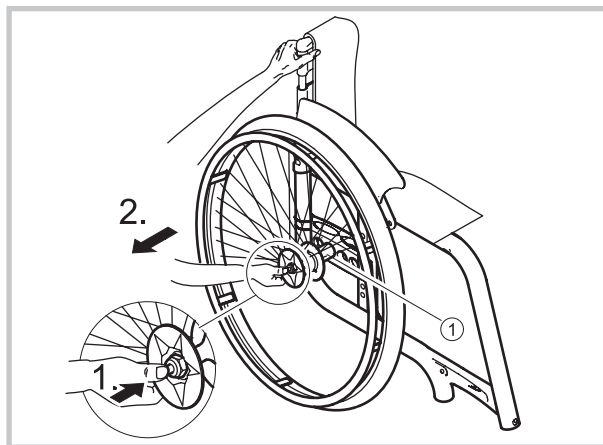


Figure 16

Removing the rear wheels

- Release the brakes.
- With one hand, hold the wheelchair in an upright position.
- With the other hand, hold the wheel at the spokes around the wheel hub (see Figure).
- Press the axle knob ① with your thumb and pull the wheel out of the adapter sleeve ②.

Installing the rear wheels

- Release the brakes.
- With one hand, hold the wheelchair in an upright position.
- With the other hand, hold the wheel at the spokes around the wheel hub (see Figure).
- Press the axle knob ① with your thumb, keep it pressed.
- Now insert the axle in the adapter sleeve ① of the axle tube until it comes to a rest.
- Release the axle knob. Now, the wheel fits tightly.



After installing a wheel, always make sure that the removable axles are engaged completely. The head must be extended completely. Check by pulling the wheels outwards.

4 Adjustments and options

4.1 Adjusting the parking brakes

The parking brakes must be readjusted after adjusting the position of the rear wheels.

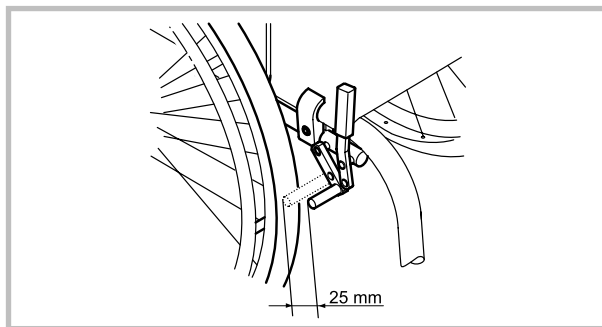


Figure 17

- Make sure that sufficient air is in the tyres. (see Chapter 5.2 - Maintenance).
- Loosen the hexagon socket bolt at the brake holder (hex. socket wrench 5mm), and move the brake to the required position.

With the brake applied, the brake shoe should not sink into the tyre more than 4 mm.

- Tighten the hexagon socket bolt at the brake holder again.



The function of the parking brakes is only ensured if sufficient air is in the tyre. (see Chapter 5.2 - Maintenance)

4.2 Adjusting the tension of the backrest cover

If your wheelchair is equipped with a backrest cover with adjustable tension, you can adjust the tension of the backrest cover to your individual requirements.

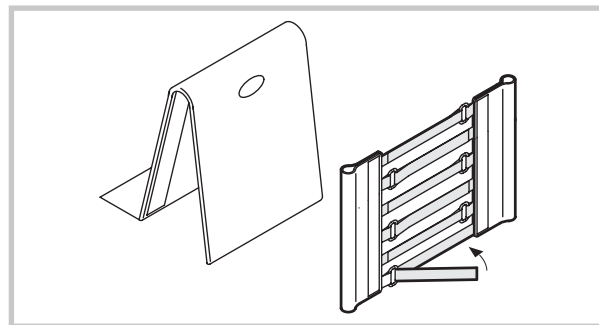


Figure 18

- Remove the backrest cushion.
- Loosen the Velcro® straps on the rear side of the seat cover by simply pulling them off.
- Tighten or loosen the straps, as required, and fix them again.



Do not tighten the topmost strap too much, otherwise folding the wheelchair becomes difficult.



Adjusting the backrest, see Chapter 6

4.3 Height adjustable push handles

The stepless height adjustable push handles allow pushing the wheelchair in a comfortable position. To ensure a maximum shoulder room for the wheelchair driver, the push handles are inclined backward.

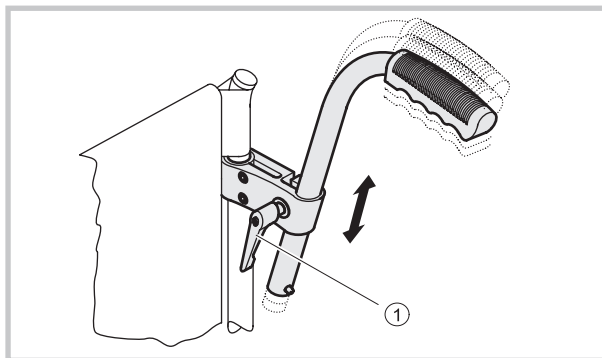


Figure 19

Adjusting the height of the push-handles:

- Loosen the locking bolt ①
- Move the handle to the required position
- Tighten the locking bolt again.

4.4 Height adjustable armrests

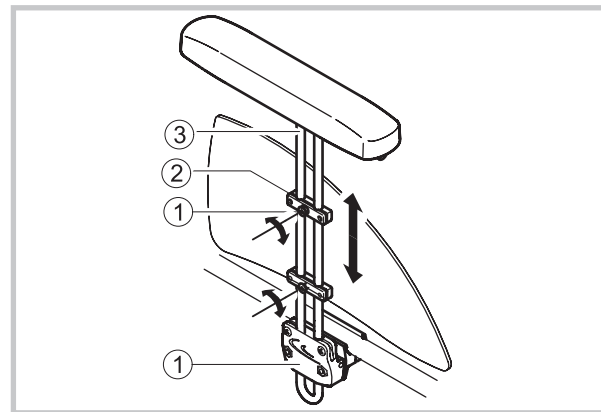


Figure 20

The height adjustable armrests can be adjusted steplessly to the exact height required or even removed completely. To adjust the height, proceed as follows:

- Loosen the bolts ① from the holder support ②.
- Slide the holder tube ③ of the armrest up or down until the required position has been achieved.
- Tighten the bolts again.



Make sure that the same adjustments have been made on both sides of the wheelchair.

To remove the armrests, simply pull them up and out of their holders. (The armrest can be removed easily or with more difficulty by tightening or loosening the bolts)

4.5 Swing away armrests

The swing away armrest can be folded back as follows:

- Loosen the Bowden cord under the seat.
- Both armrests will swing backwards.

To position the armrests correctly again, pull them forward until they snap into the correct position ("click").

4.6 Transit wheels

If your wheelchair is too wide for certain applications (e.g. when travelling by train or airplane, or when driving in narrow aisles or through narrow doors), you can use the transit wheels.

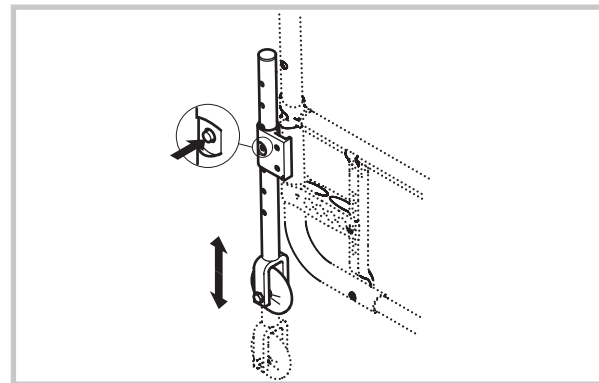


Figure 21

Change-over to transit wheels

- Move the transit wheels to their working position, by pushing the pin inward until you can pull down the tube. Push in the second pin, too, and pull the tube further down until the pin engages in the recess.



Check if the transit wheels are adjusted to the correct height. The distance to the floor must not exceed 2 cm.

- Move the wheelchair to an object which gives you a firm hold
- Hold on to the object with one hand and incline the wheelchair until the rear wheel on the opposite side leaves the floor

- Push your thumb on the head of the removable axle and pull the rear wheel out of the adapter sleeve.
- Lower the wheelchair again. Now it rests on the transit wheels on one side.
- Repeat the procedure for the other side.



Warning: Now, the parking brakes are no longer effective!

Change-over from transit wheels to rear wheels

- Move the wheelchair to an object which gives you a firm hold
- Hold on to the object with one hand and incline the wheelchair until the transit wheel on the opposite side leaves the floor
- Reinstall the rear wheel with the removable axle (also refer to Chapter 3.2 - Installing the rear wheels)



After installing the wheels, always make sure that the removable axles are engaged completely.

4.7 Antitipper

The Antitipper device prevents the wheel chair from tipping backward.

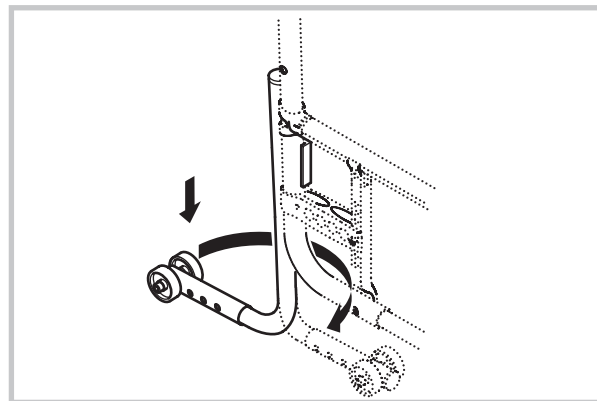


Figure 22

Activating the Antitipper

- With your foot, press the Antitipper shackle downward and outside at the same time until it engages.



In any case deactivate the Antitipper device before driving over a curbstone or a step. Danger of tipping!

Deactivating the Antitipper

- Slightly press the Antitipper shackle down and inside. The device will swing away upward.

4.8 Tipper aid

The tipper aid facilitates tipping the wheelchair for the guide when crossing a step, for example.

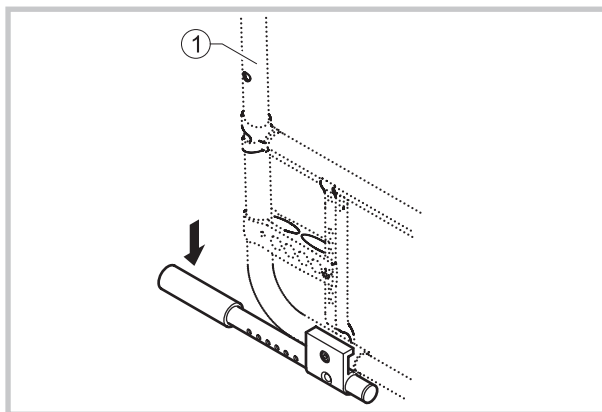


Figure 23

- Hold the wheelchair by the push-handles
- With one foot, step on the tipper aid and hold the wheelchair tipped until you have passed the obstacle.



The tipper aid must not project backward over the outer diameter of the rear wheel. Danger of tipping!

4.9 Cane holder

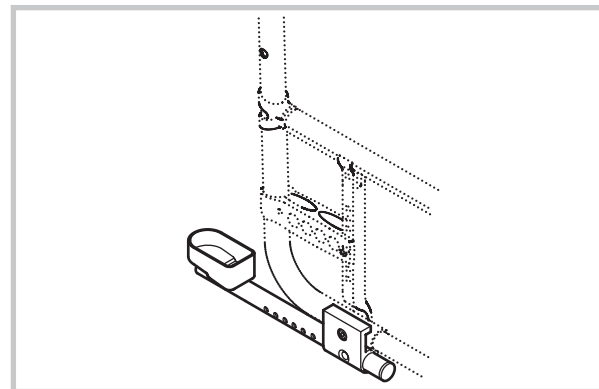


Figure 24

- Put the cane in the holder
- Secure the cane at the push handle using the Velcro strap.



The cane must not project backward over the outer diameter of the rear wheel. Danger of tipping!

4.10 Security belt

Your wheelchair can be equipped with a security belt which prevents falling out of the wheelchair.

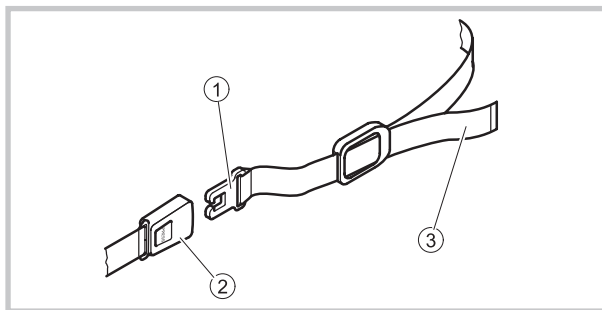


Figure 25

Belt assembly



The assembly of the belt should be carried out by your dealer!

- Pull the belt through the backrest and position it so that the buckle is placed at the front.

Opening the belt

- Press on the PRESS button and pull the locker ① out of its socket ②. The buckle will open up.

Closing the belt

- Insert the locker ① completely into the buckle socket ②.
- Pull the belt ③ until you are secured in the wheelchair.

4.11 Passive lighting

You can install two reflectors on the rear wheels.

4.12 Air pump

The air pump is delivered with a valve adapter. Depending on the size of the valve of your model, it may be necessary to turn the adapter at the air outlet of the pump.

- Remove the locknut
- Take out the valve adapter
- Turn it around and reinstall it
- Tighten the locknut again.

5 Service

5.1 Cleaning

The service life of your wheelchair increases if you maintain and clean it regularly.

Clean cushions and metal parts with a moist, soft cloth.

- Carefully dry your wheelchair after using it in rainy weather.



Sand and sea water may damage the ball bearings.

After using your wheelchair in a dirty environment, clean and dry it thoroughly as soon as possible.

Do not use rough scouring agents, aggressive cleaning agents or high-pressure cleaning machines.

5.2 Maintenance

We strongly advise that you should have your wheelchair thoroughly checked by the authorized dealer once a year, as a minimum. This is in addition to the general maintenance procedures detailed below.

In order to make sure that your wheelchair will give you the necessary safety and reliability over its whole service life, you should carry out the following work regularly, or have it carried out by your authorized dealer.

Maintenance plan

<i>Weekly</i>	<ul style="list-style-type: none">▪ Check air pressure in tyres▪ Check the proper fitting of the rear wheel axle in the sleeve
<i>Monthly</i>	<ul style="list-style-type: none">▪ Check bolted connections▪ Oil removable axles▪ Check tension of spokes
<i>Yearly</i>	<ul style="list-style-type: none">▪ General check by an authorized dealer

Measuring the air pressure

To ensure that the driving and braking function is maintained, it is important that the air pressure in the tires is correct.

- Check weekly, if there is sufficient air in the tires.

The optimum pressure values are indicated in the following table:

Type of tire	Air pressure		
<i>Smooth-running tires</i>	<i>7 bars</i>	<i>700 kPa</i>	<i>100 psi</i>
<i>Treaded tires</i>	<i>7.5 bars</i>	<i>750 kPa</i>	<i>110 psi</i>
<i>Indoor sports tire (Collé)</i>	<i>10 bars</i>	<i>1000 kPa</i>	<i>140 psi</i>
<i>Mountain bike tire</i>	<i>5 bars</i>	<i>500 kPa</i>	<i>70 psi</i>

If you are not sure about the tires of your wheelchair, contact your authorized dealer.

Oiling the removable axles

To ensure the proper function of the removable axles, they must be oiled at regular intervals.

- Pour some resin-free bicycle oil on a cloth and slightly oil the balls at the end of the removable axles, the axle and the push-button.

Checking the bolted connections

Bolted connections may loosen if the wheelchair is used frequently.

- Check the bolts monthly for tight fit, re-tighten, if necessary.



Locknuts and locking bolts should be replaced if they become loose.

For replacement please contact an authorized dealer.

Repairing or replacing tires

- Take off the wheel (see Chapter 3.2).
- Deflate the tire by pressing on the valve.
- Lift one flank of the tire off the wheel rim.



Use a bicycle tire lever for this. Do not use sharp or pointed objects such as screw drivers in order to prevent the inner tube from being damaged.

- Pull the tube out of the tire.
- Repair the tube using a bicycle tire repair kit. If repairing is not possible, replace the tube.

Fitting tires

- Inflate the tube slightly until it has its round shape.
- Insert the valve in the valve hole of the wheel rim and insert the tube in the tire (the tube should be inside the tire completely without folds).
- Starting at the valve push the tire flanks over the edge of the wheel rim with both hands. Make sure that the tube is not jammed between the tire and the wheel rim.



Use a bicycle tire lever for this. Do not use sharp or pointed objects such as screw drivers in order to prevent the inner tube from being damaged.

- Pump the tire up to the maximum operating pressure. Make sure that the tire does not loose air anymore.

Spiderwheels

If the Spiderwheel starts squeeking then proceed as follows:

- Remove the wheel.
- Tighten the bolt in the wheelrim.

Spare parts

All spare parts are available at your authorized dealer.



To determine the size of a front wheel compare its outer diameter to the scale on the back of this manual.

5.3 Service life and disposal

We assume that our wheelchairs will be in use daily. For this reason the whole equipment is subjected to an almost continuous stress and, consequently, a natural wear and tear. Taking this into consideration and provided that the wheelchair is maintained properly, the lifetime of the Küschall® wheelchairs is approximately 5 years. If the wheelchair is used less frequently, e.g. if you use it inside your apartment only, and if it is maintained perfectly, the service life will increase accordingly.

For proper disposal of your wheelchair, please contact your authorized dealer.

5.4 Detecting and repairing defects

The daily use of the wheelchair, new adjustments or changed requirements may result in defects which can be repaired.

We recommend that the adjustments should be carried out by your authorized dealer.

Defect	Possible cause	Remedy
<i>Wheelchair does not roll straight</i>	<i>Wrong air pressure in one of the rear wheels</i>	<i>Correct air pressure (Chapter 5.2)</i>
	<i>Bearing block of the front wheel fork is not in a vertical position</i>	<i>Put bearing block in vertical position (Chapter 6.4)</i>
	<i>The rear wheels do not run parallel or are axially shifted</i>	<i>Correct the shear pretension or the track (Chapter 6.1)</i>
	<i>Front wheels not adjusted to same height</i>	<i>Position the front wheels such that they touch the floor at the same time (Chapter 6.4)</i>
	<i>One or more spokes are broken</i>	<i>replace defective spoke(s)</i>
	<i>Spokes are not equally tightened</i>	<i>Tighten the loose-fitting spokes</i>
	<i>Front wheel bearings dirty or damaged</i>	<i>Clean or replace bearing</i>
<i>Wheelchair tips too easily</i>	<i>Rear wheel mounted too far to the front</i>	<i>Shift wheels backward (Chapter 6.3)</i>
	<i>Seat angle too large</i>	<i>Mount adapter plate at a lower position of the lateral support (Chapter 6.3)</i>
		<i>Select smaller front fork</i>
	<i>Backrest angle too large</i>	<i>Reduce backrest angle (Chapter 6.5)</i>
<i>Poor or asymmetric brake grip</i>	<i>Wrong air pressure in one or both rear wheels</i>	<i>Correct air pressure (Chapter 5.2)</i>
<i>Rolling resistance is very high</i>	<i>Rear wheels are off track</i>	<i>Change track (Chapter 6.1)</i>
	<i>Wrong air pressure in the rear wheels</i>	<i>Correct air pressure (Chapter 5.2)</i>
<i>Front wheels vibrate when driving fast</i>	<i>Tension at front wheel bearing block too low</i>	<i>Tighten nut at bearing block axle slightly</i>
<i>Unfolding the wheelchair is difficult</i>	<i>Back cover tightened too much</i>	<i>Slightly loosen topmost strap</i>

5.5 Technical data

			Frame 75°	Frame 85°
GB	Total width ¹⁾	[cm]	49-67	
GL	Total length ²⁾	[cm]	89	86
SB	Seat width	[cm]	32-50	
SHv	Seat height front	[cm]	42-55	
SHh	Seat height rear	[cm]	39-50	
SW	Seat angle	[cm]	Variable (6)	
ST	Seat depth	[cm]	32-50	
UL	Length of lower leg	[cm]	32-52	
RH	Backrest height	[cm]	30-55.5	
RLW	Backrest angle		-12°, -8°, -4°, 0°, 4°, 8°, 12°	
	Weight ³⁾	[kg]	9.8	
	Maximal load	[kg]	130	

¹⁾ $GB = SB + 17 \text{ cm}$

²⁾ Depends on seat level, length of lower leg, rear wheel and position of footrest

³⁾ With standard configurations can vary (+/-)

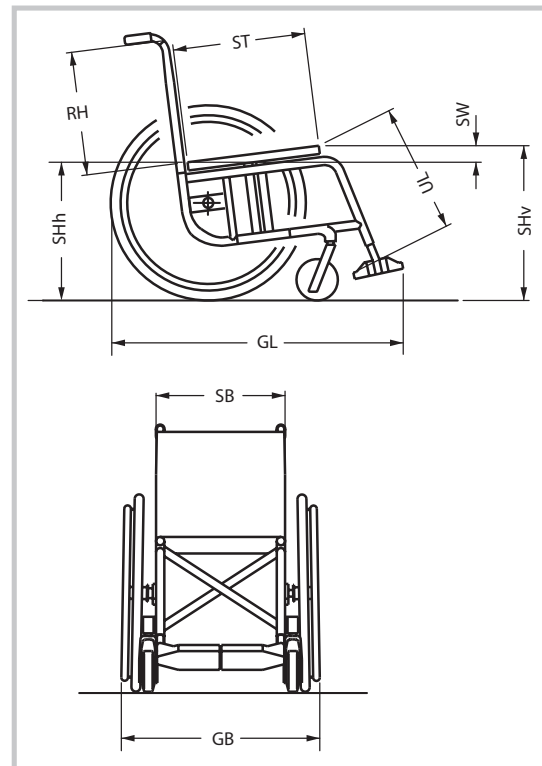


Figure 26

5.6 Warranty conditions

Standard terms

This is to certify that your «küschall» wheelchair is warranted by Küschall® for an unlimited period of time for the frame and 24 month for all other parts.

This warranty is subject to the following conditions:

1. Only küschall® wheelchairs purchased at full price are warranted against defective workmanship and materials.
2. If a defect or fault is discovered the Küschall® dealer from whom the appliance was purchased should be notified immediately.
3. The manufacturer will not accept responsibility for damage caused by misuse or the non-observance of the instructions set out in the user manual.
4. During the period of warranty, any parts that have become defective due to faulty workmanship or materials, will be renewed or repaired free of charge by the Küschall® dealer.
5. The warranty will be forfeited should any unauthorised alteration be made to the equipment.
6. The purchaser's statutory rights under the consumer Protection Act are not affected.
7. If the purchaser mounts additional adoptions to their Küschall®-wheelchair, they must obtain a written authorization from Küschall AG. Otherwise any possible liability claims cannot be asserted.

Limitation of liability

This warranty does not extend to the consequential costs resulting from fault clearance, in particular freight and travel costs, loss of earnings, expenses, etc.

Küschall® shall not be liable for:

- natural wear and tear
- inappropriate and incorrect use
- defective assembly or setting up the purchaser or third parties
- defective or neglectful treatment
- use of unsuitable spares.

6 Adjustments carried out by the authorized dealer



This chapter is expressly intended for trained authorized dealers.

Authorized dealers should inspect the wheelchair thoroughly for wear or damage and replace components as necessary

Minor changes may have great effects on the seat position and the driving behaviour and thus the safety. Since many adjustments influence each other, sufficient product know-how and technical experience is required in order to carry out these adjustments properly.

We recommend that you have all adjustments and repair work described in this section carried out by an authorized Küschall® dealer.



For your local authorized dealer, please contact the küschall® representation in your country (see back of this user manual).

6.1 One piece footplate adjustment



Please carry out these adjustments on the unfolded wheelchair only.

Height adjustment

The footrest height can be adjusted in steps of 10mm.

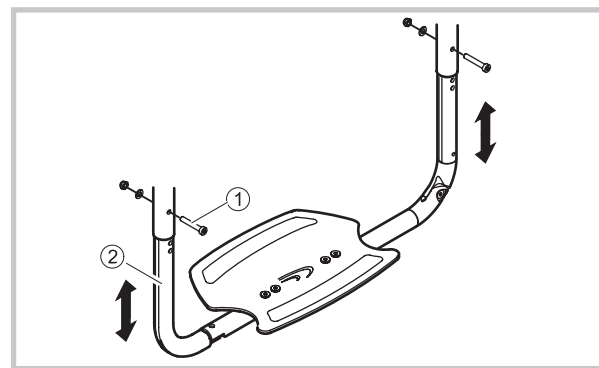


Figure 27

- Remove the bolts ① from both sides.
- Holding the telescope tube ② with both hands slide the footrest into the required position.
- Insert the bolts into the nearest holes and tighten them again.



Make sure that the same adjustment has been made to both sides of the chair.

Angle adjustment

The angle between the footrest and the frame tube can be adjusted continuously.

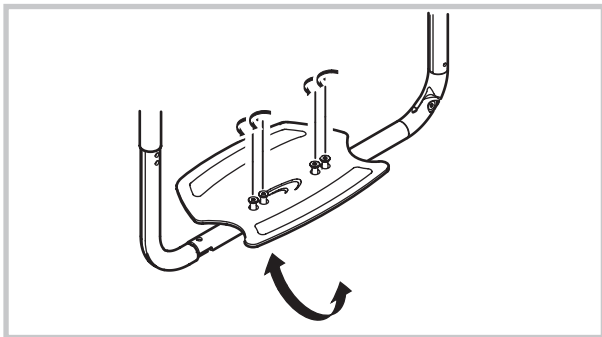


Figure 28

- Slightly loosen the bolted connection ① below the footplate.
- Adjust the angle as required.
- Tighten the bolts again.

Position adjustment

The footrest can be mounted in 2 positions.

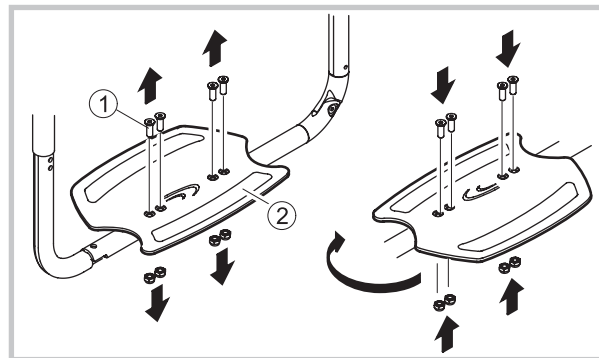


Figure 29

- Remove the bolts ①.
- Turn the footplate ② into the other position.
- Tighten the bolts securely again.

6.2 Two piece footplate adjustment



Always carry out these adjustments on an open wheelchair, never on a folded wheelchair.

Height adjustment

The footrest height can be adjusted in steps of 10 mm.

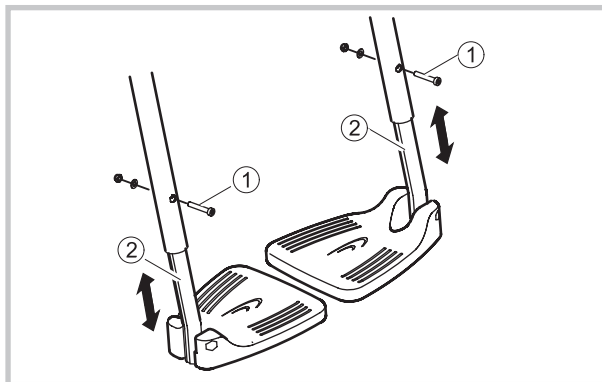


Figure 30

- Remove the bolts ①.
- Holding the telescopic tube ② with both hands slide the footrest into the required position.
- Insert the bolts into the nearest hole and tighten again.



Make sure that the same adjustments have been made to both sides of the wheelchair.

Position adjustment

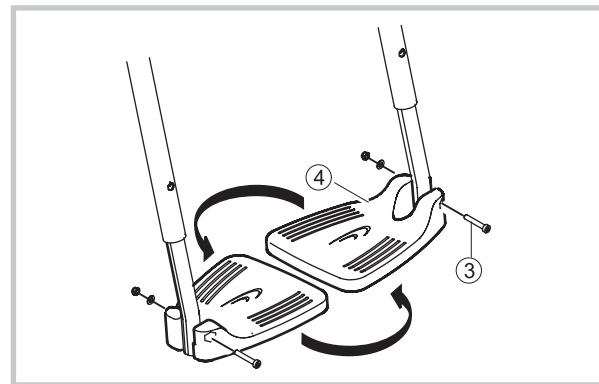


Figure 31

The footrest can be mounted in two different positions. Both footrests must be exchanged to change from the frontal position to the rear position:

- Remove the bolts ③ on both sides of the wheelchair.
- Remove the footrests ④ and insert them into the other side of the wheelchair again.
- Tighten the bolts firmly again.

6.3 Seat height rear adjustment

The seat height rear can be adjusted by repositioning the adapter plate on the frame.

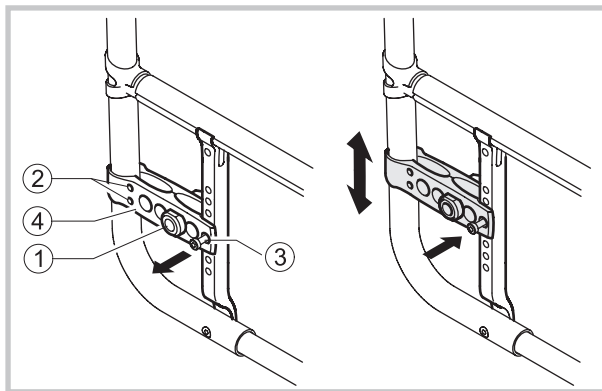


Figure 32

- Remove the rear wheels and tip the chair onto the front frame.
- Loosen the adapter sleeve ① and the rear bolt ②.
- Remove the front bolt ③ and move the adapter plate ④ into the required position.
- Mount the adapter plate ④ with bolt ③ and tighten the adapter sleeve ② (Torque 40Nm) and rear bolt ① again.

6.4 Rear wheel position adjustment

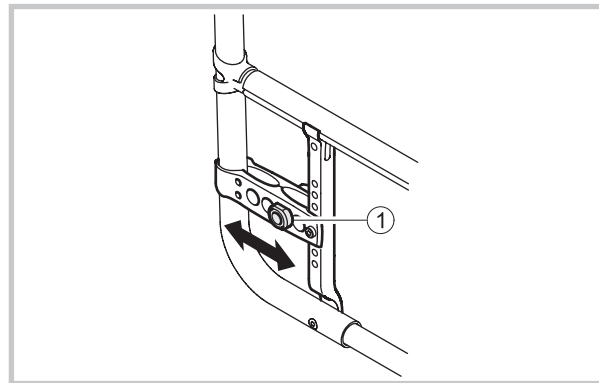


Figure 33

The further back you mount the adapter sleeve in the adapter plate, the higher the tipping safety of the wheelchair is.

- Remove the adapter sleeve ① in the adapter plate.
- Insert the adapter sleeve in the required hole of the adapter plate.
- Tighten the adapter sleeve again firmly (Torque: 40Nm).



Make sure that the same adjustment is made on both sides of the wheelchair.

The mud-guard as well as the brakes must be repositioned after an adjustment has been made to the rear wheel position.

6.5 Seat height front adjustment

The seat height front can be adjusted by positioning the castors in another position in the fork or by replacing the front fork or the front wheels.



The bearing block of the front fork should always stand vertically to the floor to achieve the optimal driving characteristics of a wheelchair.

The alignment of the bearing block must be checked and if necessary corrected after every alteration to the seating angle:

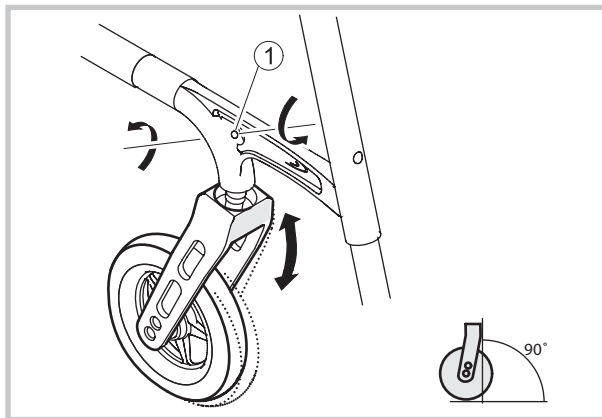


Figure 34

- Loosen the bolt ① from the front frame.

- Move the front fork in the guide until the fork is vertically aligned. To do this, position a spirit level against the front of the fork.



Make sure that the adjustment has been made to both sides of the wheelchair.

6.6 Backrest height adjustment

The height of the backrest can be adjusted in steps of 15 mm. A new backrest tube must be mounted if the adjustment possibilities do not suffice.

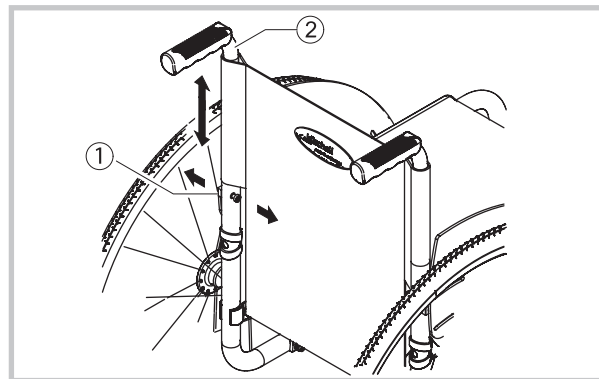


Figure 35

- Remove the backrest cover, push the upper Velcro®-Band down until the adjustment bolt ① is visible. (Velcro backrest only)

- Slide up the upholstery to uncover bolt ①.
(Standard backrest only)
- Remove the adjustment bolt ①.
- Slide the backrest tube ② up or down to the required height.
- Insert the adjustment bolt ① and tighten.
- Repeat this process on the other side of the backrest.

6.7 Backrest angle adjustment

An optional angle adjustable backrest must be mounted for a variable backrest angle.

6.8 Clothes-Guard / Mud-guard adjustment

The position of the clothes-guard or the mud-guard must be adjusted after the position of the rear wheel has been changed.

Clothes-guard adjustment

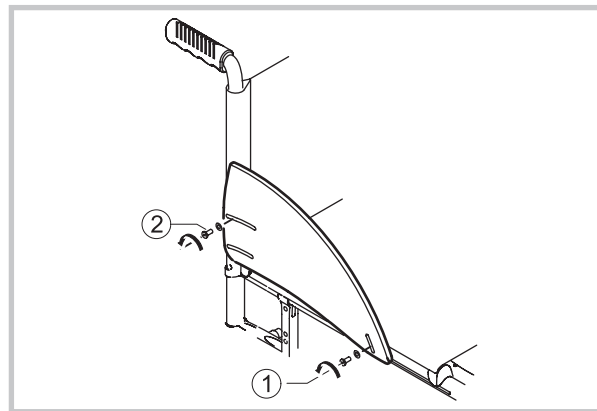


Figure 36

- Loosen the bolts ① and ②.
- Move the clothes-guard into the required position.
- Tighten both bolts ① and ② again.

Fix mud-guard adjustment

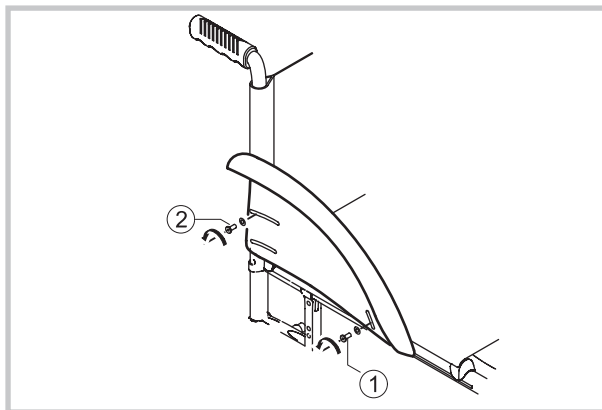


Figure 37

- Loosen the bolts ① and ②.
- Move the mud-guard into the required position.
- Tighten both bolts ① and ② again.

Removable mud-guard adjustment

Vertical adjustment

- Loosen the bolt ① from the adapter plate ② and slide this up or down into the required position. The adapter plate acts as an end-stop for the holder.

Horizontal adjustment

- Loosen the bolts on the holder support from the inner side.
- Slide the holder support on the upper frame until the required position has been achieved.
- Tighten the bolts again.



Küschall AG
Benkenstrasse 260
CH-4108 Witterswil

Your authorized dealer:



küschall® distributors:

Belgium & Luxemburg: Invacare · Autobaan 14 · B-8210 Loppem

Danmark: Invacare A/S · Sdr. Ringvej 39 · DK-2605 Brøndby

Deutschland & Ost Europa: Invacare Deutschland GmbH · Kleiststraße 49 · D-32457 Porta Westfalica

Eire: Invacare Ltd. · Unit 5, Seatown Business Campus · Seatown Road · Swords, Co. · Dublin

España: Invacare S.A. · c/ Areny · s/n Polígon Industrial de Celrà · E-17460 Celrà (Girona)

France: Invacare Poirier SAS · Route de St Roch · F-37230 Fondettes

Italia: Invacare Mecc San s.r.l. · Via dei Pini 62 · I-36016 Thiene (VI)

Nederland: Invacare B.V. · Celsiusstraat 46 · NL-6716 BZ Ede

Norge: Invacare AS · Grensesvingen 9 · N-0603 Oslo

Portugal: Invacare (Portugal), Lda · Rua Senhora de Campanhã 105 · P-4369-001 Porto

Schweiz, Österreich & Middle East: Küschall AG · Benkenstrasse 260 · CH-4108 Witterswil

Sverige & Suomi: Invacare AB · Fagerstagatan 9 · P.O. Box 66 · S-163 91 Spånga

United Kingdom: Invacare Ltd. · South Road · Bridgend Industrial Estate · Bridgend CF31 3PY · UK

www.kuschall.com

The küschall® brand is a registered trademark.

Every effort has been made to ensure that the contents of this publication are fully up-to-date at the time of going to print. As part of its ongoing improvement of products, Küschall AG reserves the right to modify existing models at any time. küschall® dealers will be notified of any such modifications. Any use of this publication, of of parts thereof, as well as any reproduction of images, must have the written consent of Küschall AG.